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UNITED STATES COPYRIGHT ROYALTY JUDGES The Library of Congress -----X IN THE MATTER OF:) DETERMINATION OF RATES) Docket No. AND TERMS FOR MAKING AND) 16-CRB-0003-PR DISTRIBUTING PHONORECORDS) (2018-2022) (PHONORECORDS III),)

CONDENSED TRANSCRIPT WITH KEYWORD INDEX OPEN SESSION

Pages: 837 through 1060 (with excerpts)

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OPEN SESSION 839 837 1 APPEARANCES (Continued): UNITED STATES COPYRIGHT ROYALTY JUDGES Counsel for Pandora Media, Inc.: The Library of Congress PETER D. ISAKOFF, ESQ. 3 ----X Weil Gotshal & Manges, LLP IN THE MATTER OF: 4 5 1900 Eye Street, N.W. Suite 900 6 6 DETERMINATION OF RATES) Docket No. 7 Washington, D.C. 20005 7 AND TERMS FOR MAKING AND) 16-CRB-0003-PR 202-882-7155 8 8 DISTRIBUTING PHONORECORDS) (2018-2022) 9 (PHONORECORDS III),) 10 BENJAMIN E. MARKS, ESQ. ----X 11 JENNIFER RAMOS, ESQ. THE HONORABLE SUZANNE BARNETT 12 JACOB B. EBIN, ESQ. THE HONORABLE JESSE M. FEDER 12 13 Weil, Gotshal & Manges, LLP THE HONORABLE DAVID R. STRICKLER 13 14 767 Fifth Avenue 14 Copyright Royalty Judges 15 New York, New York 10153-0119 15 212-310-8029 16 16 Library of Congress 17 17 Madison Building DAVID SINGH, ESQ. 101 Independence Avenue, S.E. 18 18 HONG-AN TRAN, ESQ. 19 Washington, D.C. 19 20 Weil, Gotshal & Manges LLP 20 21 21 March 14, 2017 201 Redwood Shores Parkway 22 12:07 p.m. 22 Redwood Shores, CA 94065 23 VOLUME IV 23 650-802-3000 24 24 Reported by: 25 25 Karen Brynteson, RMR, CRR, FAPR 840 1 APPEARANCES (Continued): 1 APPEARANCES: Counsel for Spotify USA, Inc.: 2 Counsel for National Music Publishers Association, 2 A. JOHN P. MANCINI, ESQ. 3 3 Nashville Songwriters Association International: DAVID ZAKARIN, ESQ. 4 Mayer Brown LLP 1221 Avenue of the Americas 5 BENJAMIN K. SEMEL, ESQ. 6 New York, New York 10020 6 FRANK SCIBILIA, ESQ. 7 212-506-2295 7 LISA M. BUCKLEY, ESQ. 8 JAMES A. JANOWITZ, ESQ. 8 JOSH WEIGENSBERG, ESQ. 9 RICHARD M. ASSMUS, ESQ. 9 10 Mayer Brown LLP 10 MARION HARRIS, ESQ. 71 S. Wacker Drive 11 Pryor Cashman, LLP 11 Chicago, Illinois 60606 12 Seven Times Square 12 13 312-782-0600 13 New York, New York 10036 14 14 212-421-4100 15 PETER O. SCHMIDT, ESQ. 15 Mayer Brown LLP 16 Counsel for Apple Music, Inc.: 16 17 DALE CENDALI, ESQ. 17 1999 K Street, N.W. Washington, D.C. 20006 18 18 CLAUDIA RAY, ESQ. 19 202-263-3000 19 MARY MAZZELLO, ESQ. 20 20 Kirkland & Ellis, LLP 21 601 Lexington Avenue 21 22 New York, New York 10022 22 23 23 212-446-4800 24 24 25

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	OPEN SESSION						
	841			843			
1	APPEARANCES (Continued):	1	Q. What is your current job title?	l			
2	Counsel for Amazon Prime Music:	2	A. President.				
3	MICHAEL S. ELKIN, ESQ.	3	Q. How long have you served as president of	- (
4	THOMAS PATRICK LANE, ESQ.	4	Pandora?				
5	DANIEL N. GUISBOND, ESQ.	5	A. Just short of a year.				
6	STACEY FOLTZ STARK, ESQ.	6	Q. Have you held any other positions at				
7	Winston & Strawn, LLP	7	Pandora during your tenure at the company?	:			
8	200 Park Avenue	8	A. I was formerly chief financial officer.				
9	New York, New York 10166	9	Q. Did Pandora recently hire a new chief				
10	212-294-6700	10	financial officer?	1			
11		11	A. Yes.				
12	Counsel for Google, Inc.:	12	~				
13	KENNETH STEINTHAL, ESQ.	13	<u> </u>				
14	JOSEPH WETZEL, ESQ.	14	Q. Would you please explain what your job				
15 16	DAVID P. MATTERN, ESQ.		responsibilities have been during your time at				
17	KATHERINE E. MERK, ESQ. King & Spalding, LLP		Pandora and how, if at all, they are changing with a new CFO onboard?	:			
18	101 Second Street	1	A. Well, as CFO, I was responsible for				
19	Suite 2300	19					
20	San Francisco, CA 94105	20					
21	415-318-1211	21					
22		22					
23		23					
24		24	revenue. So that has been a change.				
25		25	I've been also running our content				
	842			844			
1	PROCEEDINGS		licensing programs for the last couple of years,				
2	(12:07 p.m.)	2	both related to statutory proceedings as as well				
3	JUDGE BARNETT: Good morning. Please be seated. Are we all present and accounted for? Yes,	3	as our direct deal efforts with the music industry. Lots of administrative responsibilities on top of				
5	we are.	4	that, facilities, et cetera, but, you know, as	1			
6	Mr. Marks, we're calling your witness	6	now with the CFO, I focus almost exclusively on cur				
7	this morning?	7	revenue businesses, so our advertising business, as				
8	MR. MARKS: Pandora calls	8	well as the launch and growth of our subscription	, .			
9	Michael Herring.	9	businesses, and then in conjunction with that, also				
10	JUDGE BARNETT: Please raise your right		the the licensing, content licensing, side of our				
11	hand.	11	cost structure.	: 1			
12	Whereupon	12	Q. Did you prepare a written direct	- 1			
13	MICHAEL HERRING,	13	testimony in connection with this proceeding?				
14	having been first duly sworn, was examined and	14	A. Yes.				
15	testified as follows:	15	Q. If you could turn to the tab of the				
16	JUDGE BARNETT: Please be seated.	16	witness binder in front of you marked as Pandora				
17	DIRECT EXAMINATION	17	Exhibit 880. Do you recognize this document?	.			
18 19	BY MR. MARKS:	18 19	A. 880. Yes.	1			
1	Q. Good morning, Mr. Herring. Would you please state your full name for the record?	20	Q. What is it?				
20 21	A. Michael Herring.	21	A. It's my written direct testimony.Q. If you could turn to the last page of the				
22	Q. Where do you work?	22	document, please. Is that your signature?	- 1			
23	A. Pandora Media.	23	A. It is.				
24	Q. How long have you worked at Pandora?	24	MR. MARKS: I offer Pandora Exhibit 880				
25	A. A little more than four years.	1	into evidence.				
100	Il III die more onan rour jours.	1		- 1			

MS. BUCKLEY: No objection. 1 JUDGE BARNETT: 880 is admitted. (Pandora Exhibit Number 880 was marked 3 and received into evidence.) 4 5 BY MR. MARKS: 6 Q. Did you also prepare written rebuttal testimony in connection with this proceeding? 8 If you could turn to the tab that is 9 marked as Pandora Exhibit 888. Do you recognize this document? 12 Α. Yes What is that? 13 0. A. It is my written rebuttal testimony. 14 If you could please turn to the last 15 0. page. Is that your signature? 17 Α. Yes. 18 MR. MARKS: I offer Pandora Exhibit 888

MS. BUCKLEY: No objection.

JUDGE BARNETT: 888 is admitted.

Q. And, Mr. Herring, were both your direct

(Pandora Exhibit Number 888 was marked

1 focused on in-store applications. So inside a 2 BestBuy or a Tower Records, when people would go buy CDs and -- and records in store, there would be a kiosk where they could get recommendations for other music, based on some music that they liked. That business failed, and in 2004 Savage

Beast pivoted its business model to focus on streaming radio and, specifically, personalized radio, enabled by the Music Genome Project. And Pandora was launched in 2005 and grew largely by 11 word of mouth. It was a very organic growth story 12 for a long time and -- and it -- you know, enabled, 13 by the rapid growth of connectivity. The 14 introduction of Smartphones, the introduction of the 15 iPhone in particular, was a major catalyst into the adoption of Pandora as a -- as a music service.

And the company went public in 2011 and 18 grew to 80 million monthly active users, or MAUs, by 2014, where it has been relatively flat since then, hovering around 80 million monthly active users.

21 In 2015, we started the development of 22 interactive product offerings, so kind of next 23 generation music services. Pandora has always been 24 a non-interactive radio service, both ad-supported 25 and subscription. And we started working on the

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1 testimony and your -- your written direct testimony 2 and your written rebuttal testimony submitted before Pandora hired a new chief financial officer?

A. That's correct.

and received into evidence.)

- 5 Have you prepared some slides to use in 6 connection with your live testimony today?
 - Α. Yes.

into evidence.

BY MR. MARKS:

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- Could you go to the next slide, which is titled Overview of Testimony. Broadly speaking, are these the topics you're going to cover during your testimony today? 11 12
 - Α. Yes.
 - Are all of these topics addressed in additional detail in your written testimony?
 - A. Yes.
- The judges are generally familiar with your -- excuse me, generally familiar with Pandora from the Web IV proceeding and the testimony of your colleagues, but could you just briefly walk the judges through the history of the company? 20
- A. Sure. So Pandora was founded by 22 Tim Westergren 17 years ago as Savage Beast. The 23 initial idea was to create the Music Genome Project as a way of using technology to provide a music 25 recommendation engine. That initial incarnation was

1 licensing side of it with the music industry, as 2 well as the technology, including acquiring the 3 assets of a bankrupt competitor called Rdio in the fall of 2015 to accelerate those efforts.

In 2016, we completed the licensing to 5 launch the new -- new services. We, you know, redesigned the service. We launched a new brand. 8 And we launched the first of two subscription products, the Pandora Plus, which replaced Pandora 1, which was the ad-free version of the non-interactive service and which added new 12 functionality.

13 And we are launching tomorrow Pandora Premium, which is our full interactive on-demand 15 service.

- Q. Mr. Herring, how would you describe Pandora's mission?
- A. Our mission is -- is, at a high level, twofold. One is -- is to connect users, listeners with the music that they love and help them discover 21 new music, and on the other side of it, to help artists, musicians find the audiences they deserve by exposing their music to new audiences, by 23 streaming their music to their fans and -- and 25 providing revenue streams back to those artists.

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Q. And has that been Pandora's mission throughout its existence? A. It has. 3 Q. If you would please turn to the tab marked as Pandora 881 in your binder. Do you recognize this document? A. I do. 7 O. What is it? 8 This is a presentation we prepared in 9 10 conjunction with an investor analyst day we did in 11 the fall of last year. It walks through our 12 strategy, our product strategy around the launch of 13 new services, as well as the financial model 14 underlying our business strategy. Q. Did you personally participate in the 15 16 preparation of this document? 17 A. Yes. 18 Was this document appended to your 19 written direct testimony as an exhibit?

another and you like one song, the chances that:
you'll like that next song are higher. And so it's
something that -- an approach to music
recommendations that's unique to Pandora, something
that's -- we've spent a lot of time and money,
obviously, investing in.

Algorithms lay on top of that. These are
our data science team uses math to take data like
the Music Genome Project. like the massive amounts

9 the Music Genome Project, like the massive amounts
10 of thumb data that Pandora has, over 80 billion
11 thumbs over the last ten years. That's interactions
12 with consumers telling us that they like a song or
13 don't like a song in the context of a station.
14 JUDGE BARNETT: By thumbs, you mean

15 thumbs up/thumbs down?

16 THE WITNESS: Thumbs up and thumbs down.

17 So, actually, in the interface of the project, 18 there's a little thumb up and a thumb down icon.

19 You don't have to touch anything, but if you give 20 that feedback, it will -- we will incorporate that

21 into -- into the play listing, how we program the -- 22 the station for you.

23 That's something that is very core to our 24 IP as a company.

25 JUDGE STRICKLER: Is your thumbs

1 and received into evidence.)

A. Yes.

into evidence.

2 BY MR. MARKS:

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Q. I'd like to turn now to Pandora's investments in innovation and product development and ask you to describe a few examples.

MS. BUCKLEY: No objection.

JUDGE BARNETT: 881 is admitted.

MR. MARKS: I offer Pandora Exhibit 881

(Pandora Exhibit Number 881 was marked

A. So over the last 17 years, we've made a lot of investments in innovation and product, and it has come a long way. It's critical for our ability to grow our business and serve our listeners as well as possible.

You know, I've already mentioned the
Music Genome Project. That's kind of the central
original investment. The Music Genome Project is an
effort where musicologists or musicians listen to
millions of songs or have over the last 17 years and
-- and scored those songs across as many as 450
attributes, everything from tone and tempo to genre,
to, you know, the -- the instruments involved to the
-- the voice and the style of the voice, et cetera,
to create a number stream that represents sort of
the music genomic equivalent of that song.
And then we can compare that to other

23 streams for other songs in order to calculate a 24 mathematical approximate, how close those songs are. 25 And in order to then -- if one song is close to 1 up/thumbs down feature going to be or is it part of 1 2 the interactive features?

THE WITNESS: Well, so in the interactive products, there's the radio function, is absolutely important to the overall music experience for a bunch of reasons. Most of the listening will still be non-interactive, even in those products.

And we estimate north of 70 percent of

9 listening, even in an interactive product, is 10 non-interactive listening or listening to radio 11 stations or playlists, but the way the thumbs work

12 is a lot of the interactive features are influenced 13 by the data that's in the thumbs. 14 And so, you know, for example, a playlist

And so, you know, for example, a playlist builder, what we choose to build that playlist for you, the songs we choose is -- is influenced heavily by the thumbs that have been contributed to the service.

JUDGE STRICKLER: So you're saying the -the investment that was made in the technology that
allows for a thumbs up/thumbs down incorporation
into your algorithm, that investment is usable in
the interactive space as well?

24 : i i THE WITNESS: It's actually -- it's very 25 usable. In fact, it's critical to our competitive

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1 differentiation in the marketplace, actually. The
 2 -- the interactive features that were -- might have
 3 a similar feature set among competitors. Ours would
 4 be unique in the sense that it would be personalized
   to the listener because of the data we have around
   thumb activity that comes from the radio service.
7
              JUDGE STRICKLER: When the -- when the
   investments were made in these thumbs up/thumbs down
8
   algorithms or, even more broadly, in the -- in the
   technology that developed the non-interactive
11 product, was there an intentional -- more
   importantly, will the record reflect from your
   testimony or the testimony of anyone else at Pandora
   that the investments were made with the intention of
   expanding them into the interactive space at some
   future period of time?
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              THE WITNESS: Well, I can't speak to 17
   years ago. I've been at the company four years.
              JUDGE STRICKLER: Do you have any
19
   institutional knowledge?
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              THE WITNESS: Yeah, well --
22
              JUDGE STRICKLER: And, again, I'm really
   asking about whether it's -- whether it's in your --
23
   your testimony or the testimony of anyone else in
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1 believed we could be competitive because we had this data asset.

JUDGE STRICKLER: Is it your understanding that the Pandora Plus, which is the --4 the mid-range, if you will, if you'll allow me, mid-range product.

7 THE WITNESS: Yep, mid-range is accurate. JUDGE STRICKLER: That that will pay --8 that recordings or -- there will trigger the payment 9 of a mechanical license? The playing of -- of songs on Pandora Plus will trigger payments on -- under the mechanical license or only Pandora Premium?

THE WITNESS: No, both Plus and Premium. 13 14 JUDGE STRICKLER: You described Plus as 15 basically a non-interactive radio. Is it because of the replays of the other features that --

17 THE WITNESS: Replays, off-line 18 listening, et cetera, yes.

JUDGE STRICKLER: Thank you.

BY MR. MARKS:

Mr. Herring, what are the qualifications and expertise of the employees involved in the music genome coding -- project coding process?

A. So employees that we hire for that 25 project are all musicians, musicologists. They've

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1 anything that -- the testimony. THE WITNESS: Yeah. I mean, my testimony 3 is that the investment we made in the 4 non-interactive project and specifically the Music 5 Genome Project, the algorithms that lay on top of that, the service that collects the 80 billion 6 7 thumbs, the math that uses those thumbs to customize and personalize the experience are all critical to the development of the products that we're bringing

25 this proceeding, rather than asking you to go beyond

So there's two subscriptions. The Plus 12 subscription is -- is not an on-demand subscription. It's all radio. So it's absolutely critical to that product.

to market.

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From a Premium -- the Premium product, 15 16 which has on-demand, you can listen to an album or 17 build your own playlist song by song, those 18 features -- we are laying new features on top of 19 that, that are enabled by the investments we made previously. So, you know, I would argue that whether it was contemplated that that specific 22 product would be the outcome, I wouldn't say that 23 that's true. I would say back when we were 24 developing the strategy for entering the market, the 25 -- the reason we decided to do so is because we

1 studied music theory, music composition. They go 2 through a very rigorous testing program before even being offered the job. So there's a very high bar to get over. Once they've been -- they've passed that, then they go through additional training to learn the Pandora way of analyzing music.

If -- you know, if you think about 17 years and dozens and dozens of music analysts, in 9 order for an algorithm to work effectively, it has to be a very consistent analysis, scoring across -across millions of songs in order for a song that was analyzed ten years ago to be comparable to a song that was analyzed yesterday.

And so that -- there's not only a lot of training about how we do it the Pandora way, but quality assurance that goes both ways. So we -- you know, we consider them as expert in their -- in genres or in music theory and composition as -- as anybody.

- What sort of investment of time has been associated with creating and refining the Music Genome Project over the years?
- A. Well, each song takes 20 minutes to an 24 hour for a, you know, classical composition to -- to analyze. We -- we've analyzed millions of songs at

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1 of written direct testimony.

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1 this point. I would say the number of hours of 2 human time to do that is definitely hundreds of 3 thousands of hours.

- Q. And are you able to quantify the expenses 5 associated with creating and refining the Music Genome Project?
- A. Well, you know, that part -- it's 17 8 years of not just the time and effort of those 9 people, but the -- the engineers who developed the 10 technology in order to enable that data to deliver a 11 service, you know, in -- in excess of 200 million 12 dollars over that time frame.
- 13 Q. And if you hadn't already built the music 14 -- hadn't already started building the Music Genome 15 Project in connection with the non-interactive 16 ad-supported tier service and wanted to just start 17 from scratch for Pandora Plus and Pandora Premium, 18 would you need to build something like the Music 19 Genome Project?

20 MS. BUCKLEY: Objection, calls for 21 speculation.

JUDGE BARNETT: Sustained.

23 BY MR. MARKS:

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Q. Just so the record is clear, I'm not sure 25 if it came out; I apologize if I'm asking you

JUDGE BARNETT: I don't think so. MR. MARKS: I don't think it is. I can 4 find the paragraph cite. 5 JUDGE STRICKLER: I don't know that he testified specifically, you'll check it out, about 6 7 -- the general point, yes, but I don't know if it was related to Rdio per se. It might be just a 9 little more detail, but I could be wrong, so if you 10 could point to where he -- where he links up the 11 behavior of Rdio customers. 12 MR. MARKS: Well, if you -- if you just 13 look at, for instance, paragraph 22 and 23 and 24 of 14 his -- his written direct testimony, there's 15 extensive discussion of how the algorithms are used 16 in connection with product features that would be 17 : part of the interactive services. 18 JUDGE STRICKLER: It was the extra detail 19 about comparing Rdio's listeners to -- to listeners 20 on Pandora that I think -- and, again, maybe I'm

23 his written direct. And I -- is that the -- is that 24 the nature of your objection?

21 wrong. Maybe you can point to a section where --22 because the objection is it's beyond the scope of

25 MS. BUCKLEY: That is one thing, but also

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1 something that you've covered in part before. Do 2 Pandora's interactive products rely on the Music 3 Genome Project?

A. Yes.

- Do the algorithms that you mentioned a 6 moment ago, do the algorithms that Pandora has developed allow Pandora to bring new features to the 8 interactive marketplace that are not available from 9 any other service?
 - A. Yes.
- 11 0. How do they do that and what are some of 12 those features?
- 13 A. Well, so I mentioned earlier the playlist 14 builder. One of the big problems with interactive 15 services or playlist building in general is most 16 people -- and we know this from acquiring the assets 17 in 100, nearly 100 people out of the -- the 18 bankruptcy of Rdio, a failed service, beloved by 19 its, unfortunately for them few users, but -- but a 20 failed service that spent hundreds of millions of 21 dollars and didn't survive -- was that people would 22 start playlists with enthusiasm, get three or four 23 songs in, and run out of steam.

And those were called orphaned playlists. MS. BUCKLEY: Objection, beyond the scope

1 there is no discussion of playlists or orphaned 2 playlists, as far as I can tell, in the written 3 direct statement.

JUDGE STRICKLER: Well, I think it does 5 talk about playlists. He just -- I don't know that 6 he uses the phrase "orphaned playlists," but he describes something and he -- now he's just giving 8 it a name. So I don't know that that necessarily goes beyond the scope of his direct by naming 10 something that's already in there.

JUDGE BARNETT: I reviewed it this 12 morning. I know "orphaned playlist" is in this 13 paper. So overruled.

| | MRL MARKS: Thank you, Your Honor. 14 15 THE WITNESS: So the -- the context of

16 using that example is that one of the challenges of 17 -- of building playlists and engaging users in an 18 interactive service is where do they go after their

19 initial idea for a playlist, the first three or four 20 songs?

21 What Pandora does extremely well is take 22 a seed, a song, song titles in this case, and using 23 the data underlying that user's musical preferences, suggests another song and another song and another

25 song. And so the add -- add new similar songs

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1 feature within the interactive feature, the playlist 2 builder, is driven by the Music Genome Project, the 3 thumb data from non-interactive services with algorithms laid on top of it in order to enable that feature.

And it's one of the -- the hallmarks of the Premium product that's coming out tomorrow. BY MR. MARKS:

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- In addition to all of the work Pandora has done to build its service, has Pandora made investments to make it easier for consumers to access the service?
- 13 A. Yes. We've made significant investments 14 in order to make sure that people can listen to Pandora however they choose to do so. It started 16 out as a desktop app. We made significant investments in order to have Pandora work effectively on Smartphones. And a lot of our growth early on was based upon the popularity of iPhone, iOS and Android devices.

We've invested a lot of time, money, and 22 effort into integrating into automobiles. We've had 23 over 25 million integrations activated within cars in the United States. Over half of all models that 25 will be sold in 2017 will have Pandora integrated

1 into the dash. That takes a lot of time and effort

2 from a technological perspective to work with dozens

And CE devices as well, so consumer

3 of auto provides on that front.

Microwaves, I have not seen -- I have not seen a microwave with Pandora in it. Yeah, that's -- you know, that speaks actually to the -- the reason we've been able -- we don't pay for any of these integrations. So there's no fees back to -to have us integrated. These are brands that come to Pandora to

have Pandora integrated as a feature to market 9 themselves. Even the Amazon Echo is a great example of that, where obviously they have their own music 11 service, but on the box for the Echo, it advertises 12 integrate seamlessly into your Pandora account. That's because having Pandora drives engagement, which is what the Echo is really trying to do with 15 their customers.

16 JUDGE BARNETT: Does that include 17 automobiles? You're not paying for integration? 18 THE WITNESS: We don't pay for any 119 integration there. It's different model than Sirius has. They pay or have historically paid for integration.

22 JUDGE BARNETT: Thank you.

23 BY MR. MARKS:

Q. What is the order of magnitude of the 25 investments Pandora has made to facilitate expanded

1 consumer access to its service?

- Well, on the accessibility side, 3 certainly tens of millions of dollars over the years.
- 5 Q. What role did Pandora play in building a market for Internet radio advertising?
 - A. Well, I mean, you know, I think we, because we were first, really created that market. We had to build it from scratch.
- O. And are the efforts and investments associated with building that market described in 11 your written direct testimony?

 - And why was it important to Pandora to Q. create a market for Internet radio advertising?
 - A. Well, our non-interactive service, which is free to the consumer, has significant royalty costs that we needed to cover. And so we needed to find ways to monetize it.

And advertising was the most readily available.

- Q. Will -- will Pandora be offering an ad-supported interactive service or does it have plans to offer an ad-supported interactive service? 24

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5 electronics devices, like everything from smart TVs to home entertainment systems like Sonos, Roku, Apple TV, xfinity cable boxes, Amazon Echo, Google 8 Home, are all -- we have invested a lot of money and 9 effort to make sure that Pandora is integrated into 10 those systems and works really easily and 11 effectively, so as people want to listen to Pandora, 12 they can listen to it on their phone. If they get 13 home, they can switch it onto their home 14 entertainment device. They can listen to it in the car as they're driving to work. So that accessibility to our service is a hallmark of -- of 17 our strategy. JUDGE BARNETT: Mr. Herring, I don't 19 think my refrigerator has Pandora. You mentioned refrigerators in your testimony. THE WITNESS: There is a refrigerator and 21 22 hot tub that has Pandora integrated into the

BY MR. MARKS: Q. Switch to the cameras.

control.

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Q. Why is the investment Pandora makes in 2 growing the market for Internet advertising 3 important to the development of Pandora's 4 interactive subscription products?

A. So our approach to driving subscription 6 products is to build an audience, the largest audience possible, in the free-to-the-consumer 8 ad-supported business and then upsell and cross-sell 9 those users by offering value propositions, like 10 off-line listening for Plus or like on-demand 11 features and functionality for Premium, into those 12 services.

13 You know, there are other ways of 14 aggregating users and converting them into 15 subscription. You can just acquire -- you know, pay 16 for them through search or through advertising. We 17 choose to -- we think it's a better model to 18 aggregate them by providing a high-quality 19 ad-supported service and then upsell, cross-sell 20 them from there, because the ad-supported business 21 generates revenue and -- and contribution margins 22 itself.

So the investment we've made to grow that 23 24 business creates the pool of users that we will draw 25 from in order to build our subscription business.

1 BY MR. MARKS:

2 | Q. | Mr. Herring, what does Pandora's dynamic 3 insertion technology do?

4 A. That technology was developed to, based 5 upon listening behavior, determine the right moment 6 to interrupt the music listening stream.

Q. And is that the same thing as what's 8 referred to in some Pandora documents as intelligent 9 interruptions?

A. It is, yes.

Q. Does Pandora use this technology for 11 12 anything in addition to delivering advertising? A. Well, it was developed primarily to drive

14 advertising. It is used for anything that's going 15 to interrupt the music experience. So, initially, 16 that was advertising, when to -- when to play an ad 17 in order to make it most effective, but also least 18 disruptive to the music listening experience.

19 | We use it as well for artist audio 20 messages, live events, promotions, any -- any sort 21 of interruption to the music that -- or any 22 interruption to the playing of music that is a

23 non-music use.

Q. What are the benefits of artist messaging 24 25 on Pandora for artists and fans?

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Q. If you could turn to the tab in your 2 binder that's marked as Pandora Exhibit 891. Do you

3 recognize that document? A. I do.

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Q. What is it?

A. This is a graph showing the progress over 7 the last three years of the hours or -- the hours of 8 music consumed by listeners on our service, as well 9 as the revenue per thousand hours that we have been 10 generating off of advertising on that service. 11

JUDGE FEDER: Excuse me, Mr. Herring. Is 12 that what RPM stands for?

13 THE WITNESS: Yes, revenue per thousand

14 hours. 15 JUDGE FEDER: Thank you.

16 BY MR. MARKS:

Q. Was this document appended to your 18 written rebuttal testimony as an exhibit?

A. Yes.

MR. MARKS: I offer Pandora Exhibit 891

21 into evidence. 22

MS. BUCKLEY: No objection.

JUDGE BARNETT: 891 is admitted.

24 (Pandora Exhibit Number 891 was marked 25 and received into evidence.)

A. Well, start with fans. I mean, our 2 research and experience now, having served millions

3 of these messages, is that fans like the connection to the artist. They like to hear their -- the voice

5 -- the artist. They like to find out about new

6 releases and events coming up, so they look at it 7 very much as a value add to the experience.

One of the fears was they would look at 9 it as an advertisement, and so we did a lot of

10 testing and actually the -- that -- by inserting

11 artist audio messages, listeners on average listened 12 longer and come back more. So it had an aura effect

13 to the overall service. From an artist -- recording 14 artist perspective, they've used it for all kinds of

15 | ways. | | | | | 16 What we did is created a tool that let

17 the creatives be creative. And so it's everything 18 from thanking fans from listening to their station,

19 to introducing a new song that's being released, to 20 promoting an album, to promoting live events or

21 concerts with links to the tickets. You know, we've

22 seen a lot of very interesting ways of doing it. 23 That benefit has, you know, done

24 everything from sell -- sell tickets to drive

25 listening of new music, help -- help them chart,

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1 help them get exposure to new music, spin their 2 music more, and certainly has driven attendance to 3 concerts.

- Q. How do songwriters and music publishers benefit from artist messaging on Pandora?
- A. Well, to the -- you know, to the extent that songwriters are also the -- the performing artist, they benefit from -- from that exposure as well, the songwriter. To the extent it drives more 10 listening or exposes their music, they benefit from the royalties associated with that. To the -- both publishers and songwriters would benefit from those additional royalties.

To the extent it drives people to live 15 events, the songwriters and publishers benefit from 16 the royalties they receive through the performing -performance rights that venues pay -- pay around live events.

19 Q. What is Pandora's artist marketing 20 platform?

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1 message.

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A. Artist marketing platform, or AMP, is --22 it's a dashboard. It's a -- that artists can claim 23 their identity and log in and view all their 24 listening data on Pandora, as well as access

25 marketing tools, one of which is the artist audio

marketing platform help artists to make?

What sort of decisions does the artist

A. Well, data is powerful. It's -- you 5 know, it's the new oil, right, as someone just said

recently. So for artists, performing artists, in

10 they're going to a city to perform, they can look

11 and see what songs are popular in that city and --

14 performing well, being thumbed up or thumbed down,

15 in order to put their own marketing efforts behind

17 They can look at demographics across the U.S. and

18 look for pockets of their audience where there's 19 concentrations and plan tours accordingly. So

20 there's lots of -- lots of benefits to recording

21 artists based upon the -- the data in AMP.

16 those that are trending more positively than others.

12 and adjust their set list accordingly.

particular, they can look to see what songs are --

are trending, how they're trending up or down and by 9 location as well. So, you know, they can -- as

They can look at what songs are

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2 think I already kind of highlighted what they benefitted from is -- is if they have exposure drive additional listening to their music, there's 5 additional royalties associated with that. If it drives more activity in the -- in the touring aspect, they'll benefit from their music being played at live events, et cetera.

1 they benefit in all those ways. But, you know, I

- Q. If you could turn to the tab in your 9 binder that's marked as Pandora Exhibit 882. Do you recognize this document?
 - A. Yes.
 - What is it? Q.
- This is a description of AMPcast and 14 Α. artist audio messaging and AMP generally that is 15 available on our web site for artists to go learn 17 about the services.
 - Q. Was this document appended to your written direct testimony as an exhibit?
 - A. Yes.

21 MR. MARKS: I offer Pandora Exhibit 882 22 into evidence.

MS. BUCKLEY: No objection. JUDGE BARNETT: 882 is admitted. (Pandora Exhibit Number 882 was marked

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1 and received into evidence.)

2 BY MR. MARKS:

- Q. Mr. Herring, were additional investments 4 required to develop the interactive features of Pandora Plus and Pandora Premium?

 - Q. Are those investments described in -- in detail in your written direct testimony?
 - A. Yes.
 - Has Pandora invested over 100 million dollars in this initial launch?
 - A. Yes.

13 JUDGE STRICKLER: Question for you, Mr. Herring, with regard to these additional investments. When the investments are made, are 15 they made out of -- by outside third-party 17 investors, are they done out of the internal capital accumulated by Pandora, or some -- or a combination? THE WITNESS: So, explicitly, they've 20 been made out of our internal capital. So the capital that -- that we generate from our non-interactive advertising business, for example, 22 has been reinvested aggressively and --23

JUDGE STRICKLER: Retained earnings,

- Q. And do songwriters and music publishers 23 benefit from AMP? A. Well, once again, to the extent the
- 25 songwriter and the recording artist are the same,

25 basically?

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THE WITNESS: Yes. So that -- in 2016, 2 that happened, that was a pretty significant shift 3 in investment to -- to build the interactive 4 services and get the services Plus launched in the 5 fall and Premium launched tomorrow.

JUDGE STRICKLER: Does it also come out of public and/or private placements or public 8 offerings or anything else?

THE WITNESS: Yeah, I'd -- we've -- we've 10 also drawn down significantly on the capital 11 accounts in our balance sheet, which we have raised 12 money, first in the IPO, and then we did a secondary 13 equity offering two and a half, three and a half 14 years ago, and then a convertible debt offering a 15 year and a half ago in order to add cash to the 16 balance sheet which we subsequently invested.

17 JUDGE STRICKLER: I was going to ask you 18 about debt financing. Is it only just convertible 19 debt financing or is there just straight financing 20 as well?

21 THE WITNESS: We also have an 22 asset-backed line that we use to manage cash flows. 23 JUDGE STRICKLER: An asset-backed line of

24 credit?

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THE WITNESS: Line of credit, yes.

1 and base our ROI calculations on that. JUDGE STRICKLER: Do you know if there's 3 any evidence in the record that -- that Pandora has 4 produced that sets forth a sort of a sensitivity 5 analysis as to what the rate of return might be with 6 regard to different investments given different rate 7 structures? THE WITNESS: Well, I know we've done 9 direct comparisons between the proposals in front 10 today, and that's in the record. And -- but in

11 terms of overall sensitivities, I'm not sure that --12 that that has been presented. 13 JUDGE STRICKLER: I know you've -- you've

14 included in your testimony something that I would 15 call sort of descriptive --THE WITNESS: Yes.

17 JUDGE STRICKLER: -- of the ramifications 18 if the Copyright Owners' royalty structure were to 19 -- were to be adopted. Is there anything more 20 granular than that or is that what you're referring 21 to when you say you've already placed in the record 22 information, evidence with regard to the impact of 23 -- of different rate structures?

THE WITNESS: No, there's a -- there's an 25 analysis that I did for my Board that compares the

JUDGE STRICKLER: And when you -- when 1 2 the investments are done internally out of retained 3 earnings or out of the capital account of Pandora, 4 do you make a decision as to whether or not the --5 the investment is worthwhile given a range of 6 potential royalties across the royalty board? Does 7 that come into your -- your analysis; that is, do 8 you say, well, this -- we will get -- we believe 9 we'll have a net profitable return on this 10 investment, given the royalty rate structure that 11 exists, but if the royalties change, and you do some 12 sort of a sensitivity analysis as to whether or not 13 the investment is worth it based on different 14 royalty structures?

THE WITNESS: So, yes, we do -- we do 16 evaluate the stability of royalty structures, maybe 17 is the best way of putting that. Certainly, that's 18 a risk. These are not fixed inputs. You know, 19 whether it's every five years here through this 20 proceeding or other proceedings or it's every two or 21 three years in direct deals, you know, those rates 22 become negotiable.

23 So we look at things like industry trends 24 and practice, you know, to get some sense of what we 25 believe are sustainable royalty rates and then --

1 royalty structure of our proposal versus the NMPA 2 proposal.

JUDGE STRICKLER: Is that attached as an 4 exhibit or otherwise explained or described in the

testimony of any of the Pandora witnesses? 6 THE WITNESS: Yes. I think it's --

7 MR. MARKS: I'm not sure.

THE WITNESS: I'm not sure, actually,

9 yeah. I don't know.

MR. MARKS: He will be testifying about 11 the analysis that was done in comparing the rate. proposals later in today's examination.

13: THE WITNESS: Yeah.

14 BY MR. MARKS:

15 Q. Has Pandora achieved profitability in any year since becoming a public company? 16

A. No.

18 Q. What is the principal obstacle to 19 Pandora's ability to achieving sustained 20 profitability?

A. It has been high content royalty costs.

22 In deciding to enter the market for 23 interactive streaming, what assumptions did Pandora 24 make about the music publishing royalties it would 25 have to pay?

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We made assumptions that they would stay
stable at where they are today.
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- Q. Why did you make that assumption?
- Well, when we looked at what historical precedent had been, they had stayed relatively stable for a long -- for a long time, and -- and we had done deals, direct deals, with our industry partners at those rates.
- If you could turn to the tab that's 9 marked as Pandora Exhibit 890. Do you recognize this document?
 - A. Yes.

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- What is it? 0.
- This is a forecast through 2022 of the --15 both the Plus, which is the tier 2 subscription, and the Premium, which is the tier 3 subscription. You know, our forecast for those revenue lines and their relative profitability.
- JUDGE STRICKLER: One of the lines there 19 20 is, Mr. Herring, total cost of revenue. Does -does that -- that a royalty cost or does it include royalty cost?
- 23 THE WITNESS: Well, total cost of royalty 24 revenue is both.
- 25 JUDGE STRICKLER: Both what? I'm sorry.

1 negotiated in our direct deals, and it's a rate structure, a publishing rate structure based upon our proposals in this proceeding. BY MR. MARKS:

- Is it based on Pandora's rate proposal or
- was this based on the current rates and terms? A. This one is based on -- well, it's essentially the same rate. So I think this is based on the current rates and terms.
- 9 MR. MARKS: I offer Pandora Exhibit 890 111 into evidence.
- MS. BUCKLEY: I object to the entry of 12 this document as evidence. It lacks any evidentiary 13 support attached to see what the assumptions are and how these numbers were derived.

116 JUDGE BARNETT: Yes, Mr. Marks, can you lay a little foundation on this document? 17 18

MR. MARKS: Sure.

BY MR. MARKS:

- Mr. Herring, was -- was this -- was this 20 21 document prepared at your direction and under your 22 supervision?
 - A. Yes.
- 2.4 0. And what -- what were -- what 25 assumptions, if any, changed over the period of time

1 reflected in Pandora Exhibit 890? Well, so we moved into a direct licensing environment, beginning in late 2016. So, hence, there's a pretty dramatic change in our content cost associated with -- obviously, going from '15 to '16, there's also the impact of the CRB rate from a sound recording perspective. In September of 2016, we signed direct deals with the labels, which changed our cost structure both for non-interactive -- both for all three tiers, essentially, of service, ad-supported, free-to-the-consumer tier, as well as 11 12 two subscription tiers. 13

And so those assumptions, while -- those deals don't cover this entire time period. Those 14 assumptions are assumed to stay the same from a rate perspective through this time period.

- Q. And is this the type of analysis that would -- that's typical of the analysis that Pandora does in making business decisions?
 - Α. Yes. MR. MARKS: I offer Pandora Exhibit 890. MS. BUCKLEY: I maintain my objection. JUDGE BARNETT: Overruled. MS. BUCKLEY: I still don't see any
- 24 25 underlying data that would support any of these

THE WITNESS: Cost of revenue-content 2 acquisition is the royalty cost. 3 JUDGE STRICKLER: Right. 4

THE WITNESS: The other is the cost of streaming the service, the bandwidth, that sort of 5 6 thing.

JUDGE STRICKLER: So let's go to the line item cost of revenue content acquisition. That's the royalty line, right?

THE WITNESS: That's correct. 10

JUDGE STRICKLER: And is that based on a

12 particular assumption as to royalties?

13 THE WITNESS: Yes, it's based on a series 14 of assumptions, yes.

JUDGE STRICKLER: And not just a mechanical royalty but performance royalties and sound recording royalties; that's everything?

THE WITNESS: That's correct. That's all 118 19 of it lumped together.

JUDGE STRICKLER: And it's the -- is it 20 21 the same going through from fiscal year '15 22 projected out to fiscal year 2022, the same rates --

23 same rates and same rate structures, if you know? THE WITNESS: It's the rate structures 24

25 from a sound recording perspective as we've

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881 1 rate allows us to operate the business with 1 numbers. 2 certainty and -- and predictability. JUDGE BARNETT: We'll allow it. (Pandora Exhibit Number 890 was marked 3 Q. Why does Pandora favor a headline royalty 3 4 rate based on a percentage of revenues for its 4 and received into evidence.) 5 JUDGE STRICKLER: I have a question about 5 interactive products? 6 it, especially since now that it's in evidence. A. In the context of subscription products, 7 Towards the bottom of -- of Exhibit -- Pandora 7 in particular, where there's a fixed revenue per 8 Exhibit 890, the fifth line from the bottom, there's 8 user per month, a percentage of revenue is by far 9 a line that says less INCR, which I'll -- which I 9 the most rational way to structure a royalty payment 10 guess means increase. Is that right? Do you see 10 in the context that it allows for a connection 11 all the way to the left? 11 between our largest expense, which is royalty 12 expense, and the -- and the revenue associated with 12 THE WITNESS: Yes. 13 JUDGE STRICKLER: Is that less increase 13 it. So they move together. If they didn't move together, that would 14 NMPA cost? 14 15 THE WITNESS: Yes. 15 add uncertainty and volatility to our ability to run 16 JUDGE STRICKLER: And does NMPA in this 16 the business. 17 context stand for National Music Publishers 17 | Q. | Why is Pandora proposing to preserve the 18 Association? 18 current headline rate of 10 and a half percent of 19 THE WITNESS: Yes. 19 revenues? 20 JUDGE STRICKLER: What is that line 20 Well, I mean, in all honesty, a lower 21 telling us? 21 rate would be better for us and probably better for 22 THE WITNESS: It's telling us the 22: the industry generally. It would allow us to have 23 difference between the existing model and if it was 23 more cash to reinvest in the business and grow the 24 under the NMPA proposal. 24 business. Subscription business, in particular, are 25 JUDGE STRICKLER: Okay. So this actually 25 all about, you know, growing to the maximum size 882 1 is sort of an elaboration on the answer you gave to 1 that the profits allow you to grow to. 2 counsel's question before. The assumption The -- the less profitable a 3 throughout this document is not your existing rate 3 subscription, the -- the smaller the subscription 4 structure and the -- the existing rate structure, 4 business is going to be. That said, 10 and a 5 your proposed structure. This one line then builds 5 half percent is a rate that in our models, as you 6 in an alternative, which is the NMPA structure? 6 can see, we believe we can build a business over 7 THE WITNESS: Yes. 7 time. It's one that has, you know, been adopted JUDGE STRICKLER: If that was to be 8 broadly in the industry and one that I feel has --9 adopted by the judges? 9 has worked so far. 10 THE WITNESS: Yes. We've done a full 10 So, rather than fight for a lower rate, 11 analysis of it, but that's -- it is to summarize it 11 we figured keeping the status quo in a rate that we 12 on a page, yes.

13 BY MR. MARKS: 14 Q. Mr. Herring, are you familiar with 15 Pandora's rate proposal in this proceeding? 16

A. Yes.

17 Q. Let me show you the slide summarizing 18 Pandora's rate proposal that we showed to the judges 19 during opening arguments. Why is Pandora proposing 20 to preserve the all-in rate structure with a 21 headline rate that covers both mechanical rights and 22 performance rights?

23 A. Well, for us, mechanical rights aren't --24 aren't usable without the performance rights. We 25 look at it as a publishing rate. And so an all-in

12 could at least model out a profitable business over 13 time, it hasn't been proven yet by anybody that I'm 14 aware of, but over time, we believe we could model 15 out a profitable business here based on that rate. 16 BY MR. MARKS: Q. | Has Pandora proposed any change to the 17 18 royalty minimums in step 2 of the current regulations? A. No. 20 Q. Why has Pandora proposed to preserve the 22 variety of different rate categories from the 23 current regulations? 24 A. Well, I actually think that's really 25 important for the industry and for all parties

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1 considered. I mean, having a diverse set of 2 offerings so that you can address multiple consumer preferences is how we optimize a marketplace here. You know, having one -- one price, one price is going to suboptimize the environment. There are people who would pay \$4.99 but wouldn't pay \$9.99. If you don't have an offering at the \$4.99 level, those -- it's not, those people don't pay \$9.99. They choose other offerings. Whether it's free offerings or piracy or whatever, it would -- has been historically.

So I think having multiple tiers allows 13 for innovation. It allows for diversity from a product perspective. And it grows the overall pie, 15 both from a revenue perspective for Pandora, as well as royalties to the copyright holders.

Q. Why has Pandora proposed to eliminate the mechanical -- I'm sorry.

JUDGE FEDER: Excuse me.

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THE WITNESS: The judge had a question. JUDGE FEDER: This rate is going to be

21 22 about five years. Our next proceeding will be five 23 years from now.

24 What is the -- in your estimation being 25 in this business, are the offerings that are laid

1 recognize that.

And if that continues, this is one step in that direction, having two products at Pandora, three. You know, I would foresee that we would have multiple products in addition to those three by five vears from now. 7

JUDGE BARNETT: Would you foresee them petitioning for another rate proceeding to set rates for something that's totally different and outside the categories in Subparts B and C?

THE WITNESS: I'm not sure how we would 111 12 pursue licensing, to be honest. You know, we -- we would likely go and try and do direct deals initially, for sure, in order to experiment. That 14 is really difficult because of the fractured nature 15 of the royalty structures, you know, and the 17 ownership, uncertainty, and all the issues that we 18 have, especially in the publishing world.

But, you know, that's one of the reasons 20 we've been working hard on identifying rights, creating those databases, not just us, other distributors in the marketplace, because having that allows us to have the right conversations to -- to 24 bring different products to market. But whether 25 that turns into -- whether that can be enabled

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1 out in the current rate structure likely to be the 2 same offerings that are out there in the marketplace 3 five years from now?

THE WITNESS: I hope -- I hope not exclusively. I -- I think it lays good foundation to grow the ecosystem of consumers paying for music again. Having multiple price points is really important for that, I -- I believe personally as a businessman, running -- working in this industry.

What I would like to see over the next 11 five years is more diversity around offerings like on this run, and we have those conversations with our music industry partners constantly.

You know, in my -- this is my fourth 15 subscription business that I've launched. The other three are very different industries, not 16 music-related. In every one, they were optimized by 17 creating multiple price points, multiple product configurations, in order to meet different demands,

20 whether it was consumer or enterprise. 21 I think music has -- has been forced into 22 this one price, one product, all -- you know, 23 all-you-can-eat bucket for too long. The more we

24 can diversify that, the better it is for the 25 industry. I think the industry has started to 1 through a rate proceeding or not is not my expertise. 2 3

JUDGE BARNETT: For your non-interactive and your custom and ad-supported prospective Premium, all of those services rely on the Music Genome Project, correct?

THE WITNESS: Correct.

JUDGE BARNETT: So if somebody is 9 listening for free, asks to listen to Imagine, they're going to get the same song as they would if 10 they were in -- in the Premium pool and asked to listened to Imagine? They're going to hear the same 12 13 song, correct?

THE WITNESS: Well, except that in the free service, there is no on-demand functionality. So you could seed a station with Imagine, but under the DMCA restrictions, we couldn't just play Imagine.

Now, if Imagine is played on that station 20 or a Beatles station or a cover of it is played by -- Pentatonix just did an amazing version of it -then, you know, you -- it would be the same song 23 that you would hear on the two services. So the -the actual musical work that's played is the same 25 musical work, but what's different as you -- if you

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1 were listening to it on Plus, you could listen to it 2 off-line in a subway when you had no connection, 3 where you couldn't in the free product.

If you're listening on Premium, you could 5 say I want to listen to Imagine and I want John 6 Lennon's version, not Pentatonix, and you could 7 choose a specific version besides what the genome 8 decided to play for you.

So the idea is you give that value 10 proposition of additional control, features, and 11 functionality to move people up that value chain in 12 order to drive higher ARPU for us, but also in 13 exchange for the features and functionality to be 14 licensed in those contexts, you know, it's a -- it 15 pays a higher royalty to the -- to copyright holders 16 as well.

17 JUDGE BARNETT: Okay. So -- but if a 18 subscriber pays \$4.99 --

THE WITNESS: Yes.

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20 JUDGE BARNETT: -- or \$9.99 and they 21 request to listen to Imagine, they're going to hear 22 the same -- they want John Lennon's Imagine; they're 23 going to hear the same song?

24 THE WITNESS: They are, but the \$4.99 25 product is still radio. It's still -- they can't 1 be listening to, what you've thumbed up. So -- so

for you, yes. But for Ben, you know, he likes the

4 Beatles, but he likes a different -- he's a Sergeant 5 Pepper guy where you're a Rubber Soul guy, right?

6 So you could -- he'll hear a different mix in both 7 cases, but from a between products, it would be the

8 same sort of data that's used to create that

9 playlist, whether it's a radio station in Plus or a 10 -- or adding similar songs feature within Premium.

The difference in Premium now is you can 11 12 -- you see all the songs that are going to play. In 13 Plus, you don't get to know. It just plays for you. 14 And you can say, yeah, not that one, not that one, 15 not that one, and reorder them. So functionality 16 that's very specific to on-demand listening, that 17 will exist in Premium; none of that exists in Plus. 18 BY MR. MARKS:

19 Q. Just so the record is clear, you used the 20 interpret ARPU. What is ARPU a reference to?

21 A. ARPU is average revenue per user. 22 Usually referred to as average annual revenue per 23 user, although you can get a month. Sometimes it's 24 monthly; sometimes it's less. So if we talk about

Q. Why has Pandora proposed to eliminate the

A. | Well, this goes back to, you know, what I

25 the ARPU of a Premium user, at 9.99, it's

17 discounts?

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1 put in Imagine and then hear the song. It's the 2 same concept of they could see the station or they 3 could put a Beatles station in and they could hear 4 Imagine if it's served, but they can't choose to --5 to listen to that song.

JUDGE BARNETT: Okay.

THE WITNESS: So only by paying \$9.99 can they actually do that piece.

JUDGE FEDER: To change the hypothetical 10 a little bit --

THE WITNESS: Sorry.

JUDGE FEDER: -- if the \$4.99 customer 13 were to seed a station with Imagine and the \$9.99 14 customer were to start a playlist with Imagine, are 15 they going to end up with the same list of songs 16 either on the radio side -- not necessarily in the 17 same order, but on the radio side and on the 18 generated playlist using the music genome? THE WITNESS: It's the same user, if it's

20 you? 21

22 23 the same or very, very similar playlist because we 24 would use your musical preferences as determined by 25 your demographics, your geographics, the music you'd

JUDGE FEDER: Um-hum. THE WITNESS: Yeah, it likely would be

5 -- you know, the difference -- the distinction 6 between mechanical and performance from a business 7 perspective is not -- is not a meaningful one. So, 8 you know, there might be a purpose for that that I 9 don't -- you know, that I'm not aware of or that 10 doesn't matter to me, but from my purposes, it adds 11 complexity into a system that's not needed. I'd 12 rather just have a single rate and a single 13 calculation. 14 O. Why has Pandora proposed to adjust the 15 terms of the current regulations to accommodate 16 promotional efforts such as family plans and student

3 mechanical-only floor in Subpart B?

1 approximately \$120 per year.

A. Yeah, so this actually goes back a little 19 bit to the price diversity conversation we were 20 having earlier about \$4.99 to \$9.99. By creating 21 different price points, you access users that 22 wouldn't otherwise subscribe.

: : : So: students who have a smaller budget, as 23 24 long as they are still students, having a student 25 plan that is at a discount, it allows them to be a

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1 paying customer, teaches them about paying for music, builds that habit, and then when they graduate and enter the workforce or, you know, society generally, then they upgrade, you know, more -- more naturally into being -- paying a standard price.

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Similar with family plans, you know, you have children in the -- in the home that are not necessarily going to have their own subscription, we can get -- add to the overall revenue pie, also engage with listeners at a younger age or an older age. We actually see family plans used for grandparents and such as much as we see it used for kids. People who we can add to the subscription roles who wouldn't necessarily do their own 16 subscription.

Now, the -- a side benefit of that is we're monetizing an audience that's extremely hard 19 to monetize in an ad environment. So, you know, 20 from a business perspective, you get two benefits. You get the benefit of -- of monetizing in a subscription environment an audience that would otherwise not subscribe. So you're adding incremental subscribers to the pool. That's good. 24 Second is you're targeting those

1 to make over time. So there's that aspect of it. Second is it's a perverse incentive for me to limit listening in a subscription -subscriber environment. And that's not -- that's not in anybody's interest who is getting paid out of a subscription basis, whether it's us or the copyright holders. So engagement, or the number of hours -- we measure engagement by hours per user per month -- is the Number 1 indicator as to whether 9 someone will convert from a trial into subscription 10 or continue to subscribe, retain over time or churn 12

And if -- if we're paying on a per-play basis, we have an incentive to reduce listening as much as possible in order to be profitable. By reducing engagement, we increase the propensity to churn or likelihood to cancel.

And that -- that is -- now I've got two incentives that fight against each other. Of course, I don't want them to cancel, but I also can't afford them if the per-play rate is -- it doesn't work in the -- in the context of what revenue I can charge.

JUDGE STRICKLER: Why would the per-play 25 rate cause an increase in churn?

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1 incremental subscribers out of pools that are hard 2 to monetize anyway, 13- to 17-year-olds, really hard 3 to monetize with advertising; 55 and older, really hard to monetize from advertising. So those are two pools that, if we can convert as many of them as we can in subscription, that's good for both us as a business, but also for copyright holders as it 7 increases their overall royalty payments.

- Q. Have you reviewed the Copyright Owners' rate proposal in this proceeding?
 - A. Yes.
- Let me show you a slide with a few 13 aspects of the Copyright Owners' rate proposal depicted and ask you to comment on some of them.

Why is Pandora opposed to the imposition of a per-play minimum rate in this proceeding?

A. Well, you know, it's connected to why I 18 think percentage of revenue makes sense. A per-play 19 consumption-based model where the revenue is fixed per user creates a lot of -- of uncertainty and 21 volatility around what margins are going to be for 22 that product. That's a business problem. And, you 23 know, from a business perspective, that uncertainty 24 means that I'll less invest less in that business, 25 you know, that I -- I don't know how much I'm going

THE WITNESS: Because it's -- there's a step in the middle. So if there's a per-play rate, my incentive is to reduce the hours people consume of music. So if I do that, it lowers engagement. Engagement is the Number 1 indicator as to retention over time or the -- which is the opposite of churn.

So there's a direct correlation between engagement or hours per use, hours per user, and -and churn. So the higher hour per user, the lower churn. If I'm incentivized to hold hours per user 11 down, churn is going to go up. That is a -- that is a truism among subscription businesses. All four 13 that I've run, that's been the truth.

To be honest, one of the reasons why we focused on percent of revenue in all our sound recording deals, the direct deals, is that, you know, that argument was completely adopted by the labels in the context of what they want is build subscribers who stay subscribers for a long time, right?

21 And we've aligned -- when we say win/win, 22 it's we're aligned to the royalty structure to the business objective of Pandora and the -- and the long-term royalty streams of the copyright holders 25 in that environment.

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899
                                                      897
              That's what we're trying to accomplish
                                                           1 in the room?
 2 by percent of revenue in this case. A per-play
                                                                        JUDGE BARNETT: You may.
 3 structure blows that up.
                                                          3
                                                                        THE WITNESS: Thank you.
              JUDGE BARNETT: Mr. Herring, if you have
                                                                        JUDGE STRICKLER: I think they're getting
 5 a subscription service and if the royalty rate is a
                                                          5 up now.
 6 per-play rate and it's low enough that it would
                                                                        JUDGE BARNETT: No, we're not -- we're
                                                          6
   essentially equal what you're paying on a percent of
                                                             not going into restricted yet.
                                                                                                1 1 1 1
 8 revenue, then why would you discourage listening
                                                             THE WITNESS: We're not yet. Sorry.
                                                          8
 9 and, therefore, discourage engagement and,
                                                             BY MR. MARKS:
                                                          9
10 therefore, you know, encourage churn?
                                                             Q. We'll go into restricted fairly shortly
              THE WITNESS: Well, low enough is a very
                                                         11 so we can come back to it.
12 important --
                                                                       What is your view of the Copyright
13
              JUDGE BARNETT: Okay. I got that.
                                                         13 Owners' proposal to charge a per-play rate to all
                                                         14 streams that are made in connection with a product
14
              THE WITNESS: -- qualifier there. So, I
                                                         15 that offers both interactive features and
15 mean --
16
              JUDGE BARNETT: What --
                                                         16 non-interactive listening within the same product?
17
              THE WITNESS: If you remember, in the --
                                                         17
                                                                   A. Yeah, I -- I mentioned earlier, we expect
18 in the last time I was in front of you, there was a
                                                         18 non-interactive listening to be 70 percent or more
19 per-play rate under subscription in that
                                                         19 of listening in the interactive product, in the
20 environment. And it was about 70 hours, was the
                                                         20 product that offers interactive listening. So, I
21 break-even. If you listen to more than 70 hours a
                                                         21 mean, applying a per-play rate across is meaning
22 month at that rate, I have now lost money on every
                                                          22 paying a much higher rate on streams that aren't --
23 subscriber. And so we -- we, you know, would find
                                                         23 you know, aren't enabled by that licensing.
24 ways to hold back listening.
                                                                   Q. Is the Copyright Owners' proposal to
              So if that rate was really, really,
                                                          25 apply a single rate to the entire marketplace for
                                                                                                                900
 1 really minuscule so that it never broke through a
                                                          1 services with interactive features a good idea?
 2 percentage of revenue number, then it becomes
                                                                   A.
                                                                       No.
 3 irrelevant, but that's -- the risk is that that rate
                                                          3
                                                                       Why not?
                                                                   Q.
 4 is too high, and that it creates problem --
                                                                   A. It essentially eliminates the ability to
                                                          4
 5 unintended consequences based on engagement.
                                                           5 price differentiate a $4.99 versus a $9.99 product.
              And Pandora has -- you know, maybe we're
                                                           6 So I think it's really important to keep that:
 7 more sensitive because our engagement is much higher
                                                          7 structure that allows us to have some diversity in
 8 than anybody else in the industry.
                                                          8 product.
              JUDGE BARNETT: Just in what ways would
                                                                        JUDGE STRICKLER: I don't know if you can
10 you discourage listening, if it were a per-play
                                                         10 answer this without going into restricted session,
11 rate? And wouldn't you be doing that -- that's
                                                         11 but building on Judge Barnett's question from
12 cutting off your nose to spite your face because
                                                         12 before, has Pandora considered a hybrid approach or
13 you're going to lose a subscriber if you do that?
                                                         13 what economists would say is a two-part tariff,
              THE WITNESS: Can we go into restricted
14
                                                         14 where you have a certain monthly subscription fee
15 session? This -- I mean, this is kind of --
                                                         15 but then there's a small per-play rate as well
16
              MR. MARKS: Can we go in restricted
                                                         16 because you just testified before about the essence
17 session?
                                                         17 of the problem is getting a per-play -- a per-play
18
              JUDGE BARNETT: Were you planning to do
                                                         18 rate that's low enough --
19 that later?
                                                                       THE WITNESS: Yeah.
                                                         19
                                                         20 JUDGE STRICKLER: -- that it makes sense.
20
              MR. MARKS: We are.
21
                                                         21 And -- and that's the risk that you take. If you
              JUDGE BARNETT: Okay. Well --
              THE WITNESS: Could I answer that
                                                         22 get it wrong, then you might have to have listener
23 question ---
                                                         23 caps or other ways to dissuade listening.
24
              JUDGE BARNETT: Yes, please.
                                                         24 THE WITNESS: Yeah.
25
              THE WITNESS: -- without my competitors
                                                         25
                                                               JUDGE STRICKLER: But can you sort of
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1 have your cake and eat it too with the two-part
2 tariff, setting a low -- a very -- well, a given
3 subscription rate lower than the $9.99 or lower than
4 the $4.99 and then have usage rates, per-play rates,
  that are sufficient --
             THE WITNESS: Yeah.
             JUDGE STRICKLER: -- to be able to make a
  profit?
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THE WITNESS: So, yes. That's been something that has been debated pretty intently. You know, we're trying to learn from mistakes of the past. So if you think about cell phone plans have made that migration already.

JUDGE STRICKLER: Right.

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15 THE WITNESS: The issue is twofold. The 16 one is that type of structure is -- is complex to --17 it does comes out of the complexity. So complex to manage from our perspective in terms of managing 80 million individual accounts and what they're paying us and what they're not.

On a per-song basis, we're talking about 21 22 fractions of pennies, so until Bitcoin is really widely adopted, that's going to be difficult.

But even if you did buckets and you based 25 it on hours, that would get -- it just gets

1 incredibly difficult. You know, a couple more tens 2 of millions of dollars in development costs, but, you know, which we don't have. And then the other side of it is and for a lower return. So you're -you're kind of killing me on both ends. BY MR. MARKS:

- Do you think the Copyright Owners' Q. proposal to impose a late fee on mechanical rights payments is reasonable?
 - Α. No.
 - Why not? 0.

Α. Well, I mentioned earlier the fractured 13 nature of ownership here is really difficult. We pay everybody we can figure out to pay and we pay them on time. We don't play games on that front at 16 all. Ownership can be complex on a down-to-the-song level. It's certainly complex on an industry level 18 in terms of it changes a lot.

There's no single repository. The metadata is incomplete and something that we will 20 work very hard internally to get right. We've spent 22 substantial sums to a third party to help us solve 23 these problems. So we -- we make every effort to do 24 this the right way, but -- and we pay every dollar 25 we can -- we can pay. And always have.

1 complicated really quickly. So, administratively, 2 that's really hard.

Now, more importantly -- not impossible, but hard. More importantly, it's consumer confusion, and -- and adoption is really the problem. And the perception in value.

And the reality is the focus on this for a few users ignores the fact that most -- most users are -- you know, in that example I gave you where 10 the break-even is at 70, that was 1.2 percent of our subscribers were unprofitable, you know. So we do deal with it in the context of a -- because the rate 12 was low enough, to use your -- your term.

13 But that, as a -- as a consumer value 15 proposition, is really hard to do. There's this -there's this view that even if people never are going to hit that sort of threshold, the threat that 17 18 they're going to have to write a variable check 19 every month is enough for people not to subscribe. 20 And when we did our own analysis as to how big -you know, how we can market this, how it can be 22 competitive against other services and such, adding complexity into the consumer experience is a big red 24 flag.

So there's both administratively and

So I don't -- I think it's a solution in 2 search of a problem that doesn't exist. The real 3 problem is the data issues, and incentive to get that data right is important, i.e., incentive to get paid.

And if you add a license fee or, sorry, a late fee and, God forbid, a user's late fee on top of that, the incentive to get that data right soon lessens significantly. And already we -- I think we 10 have a hard time getting data accurate to make the payments that we want to make.

I think adding a late fee just creates the wrong environment between us and our publishing partners.

- For works for which Pandora does not have reliable ownership information at the end of a royalty accounting period, would Pandora be opposed to putting royalty payments in an interest-bearing escrow account until publishers or the NMPA could provide reliable ownership information?
 - Α.

JUDGE STRICKLER: No, you would not be

23 averse?

24 THE WITNESS: No, I would not be averse

25 to that.

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Docket No. 16-CRB+0003-PR March 14, 2017 OPEN SESSION

OPEN SESSION							
	905			926			
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. MARKS: At this point, Your Honors, if we could clear the courtroom, we're going to go into restricted session. JUDGE BARNETT: Okay. Now we're closing the hearing room. If you are in the hearing room and do not have privilege to hear or see restricted materials, if you would please wait outside. (Whereupon, the trial proceeded in confidential session.)	1	MR. MARKS: I offer Pandora Exhibit 892 into evidence. MS. BUCKLEY: No objection. JUDGE BARNETT: 892 is admitted. (Pandora Exhibit Number 892 was marked and received into evidence.) BY MR. MARKS: Q. Does Ticketfly utilize mechanical rights to musical works? A. No. Q. How does Ticketfly generate revenue? A. It takes a fee on a per-ticket basis for every ticket sold through its platform. Q. Can a Pandora user purchase a concert ticket through Ticketfly on Pandora's web site or app? A. No. Q. Do you need to be a Pandora user in order to buy tickets to a concert through Ticketfly? A. No. Q. Does Pandora offer alerts about upcoming concerts held at venues other than the ones that use Ticketfly to sell tickets?				
23 24 25		23 24 25	A. Yes.				
23		25	JUDGE STRICKLER: Question for you. On				
	925			927			
1 2 3 4 5 6 7 8 9 10 11 12 13 14	OPEN SESSION BY MR. MARKS: Q. I should say, in the interest of full disclosure, a few short topics, not just a few questions. THE WITNESS: Break out my long answers. Use up the time. We're ready. JUDGE BARNETT: Yes. BY MR. MARKS: Q. Mr. Herring, what is Ticketfly? A. It is a software and service ticketing platform that — that venues use to sell advanced tickets. Q. Could you turn to the tab in your binder	2 3 4 5 6 7 8 9 10 11 12 13 14	Exhibit 892, it says Ticketfly is a subsidiary of Pandora. Is it a wholly-owned subsidiary? THE WITNESS: It is. BY MR. MARKS: Q. Does Pandora receive any commission fee if a Pandora user buys a buys concert tickets through the link provided in Pandora's streaming service? A. No. Q. Is Ticketfly operated as a separate business from Pandora? A. Yes. Q. Does it have separate P&L statement? A. It does.				
15 16 17 18 19 20 21 22 23 24 25	that's marked Pandora Exhibit 892? A. Yes. Q. What is it? A. This is a description of the company from their web site. Q. When you say "company," you're referring to A. Ticketfly. Q. Was this document appended to your written rebuttal testimony as an exhibit? A. Yes.	15 16 17 18 19 20 21 22 23 24 25	Q. Does it have any overlap in management teams? A. No, it has its own management team. Q. What percentage of Pandora's consolidated revenues come from Ticketfly? A. About 6 percent. Q. And has Pandora done projections of what percentage of consolidated revenues Ticketfly will represent going into the future?				

Docket No. 16-CRB-0003-PR March 14, 2017 Rates and Terms (Phonorecords III) **OPEN SESSION** 930 1 live event venue that is licensed with ASCAP, BMI, Q. Can Pandora operate as an unprofitable 2 and SESAC using these agreements. music service because of its ownership of Ticketfly? MS. BUCKLEY: I don't think agreements of 3 A. No. this nature is the same thing as saying that Pandora Has Pandora ever offered its music Q. 5 has entered into any of these agreements. streaming service at a discount or for free to drive MR. MARKS: We're not representing customers to Ticketfly? Pandora has entered into these specific agreements. 7 A. No. We're representing that these are the form Q. Does Pandora have any incentive to 8 agreements that ASCAP and BMI use to license concert operate its music streaming products at a loss? venues and concert promoters to provide further evidence that additional ticket sales drives Q. Do any of Pandora's licenses with record 11 12 additional revenues to rightsholders. 12 labels, performing rights organizations, or music JUDGE BARNETT: Sustained. 894, 895, 897 13 publishers include, for purposes of calculating a fee, Ticketfly revenues within the definition of 114 -- are those the numbers? MR. MARKS: I think it's 893, 894, and 15 Pandora's revenue? 16 895. 116 A. No. 17 JUDGE BARNETT: That's right. Thank you. Do songwriters and music publishers 17 Q. 18 benefit financially if Pandora drives incremental Are rejected. 18 (Pandora Exhibits 893, 894, 895 were concert ticket sales by alerting its users about 19 rejected from evidence.) concerts? 20 21 BY MR. MARKS: 21 A. Yes. 22 Q. How? 22 Q. Does Pandora have any concerns that there will be less musical works available in the future The venues that Ticketfly sells tickets 23 A. for Pandora to stream and make available to 24 for and -- and the venues that we don't sell tickets 25 consumers if Pandora's rate proposal is adopted? 25 for that we drive tickets for pay performance fees 931 929 1 to ASCAP, BMI, SESAC, et cetera, so that songwriters 1 Α. No. Why not? 2 and publishers receive royalties in that way. 2 Q. There has been no shortage of music Q. If you could turn to the tabs that are 3 3 available over the last few years under these rates. marked as Pandora Exhibits 893, 894, and 895. 4 ASCAP, BMI continue to grow and add works to their 5 A. repertoire, which we're licensed with. Do you recognize these documents? 6 Q. We have done multiple direct deals in 7 7 A. Yes. that same time frame. Q. What are they? 8 What is your familiarity with the growth A. These are performance agreements for 9 10 ASCAP, BMI, for live events venues. 10 of repertory of ASCAP and BMI? Well --Are you personally familiar with these 11 Α. 11 Q. MS. BUCKLEY: Objection. Unless it's 12 12 documents? based on personal knowledge, I don't think that this 13 13 A. Yes. is appropriate testimony for this witness. If all MR. MARKS: I offer Pandora Exhibits 893, 14 he has done is read ASCAP's annual report, which is 15 894, and 895 into evidence. pure hearsay, I really don't think he can talk about MS. BUCKLEY: I -- I object. The mere 16 16 what is happening at ASCAP in terms of how many 17 17 fact that Mr. Herring may be familiar with this writers there are. 18 document is not the same thing as saying that he 18 JUDGE BARNETT: I got -- I got the 19 uses it in Pandora's business or that he licenses 19 20 20 anything pursuant to these agreements. objection.

21

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21 BY MR. MARKS:

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Q. Mr. Herring, have you -- have you ever

A. Well, we do put on live events where we

23 entered into a -- an agreement of this nature?

25 have licenses like of this nature. I also own a

MS. BUCKLEY: Thank you.

25 growth, and I think he should be allowed to answer

24 asked him was what is his familiarity with the

JUDGE BARNETT: Do you want to try and --

MR. MARKS: Yeah, but the question I

1 testimony, about whether or not there's any concern |

OPEN SESSION

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1 and explain so I can lav a foundation. JUDGE BARNETT: Okay. THE WITNESS: You know, we are partners. 3 4 We have deals, and have for years, with ASCAP and 5 BMI, and I read their annual reports and their own 6 statements about their repertoire. 7 BY MR. MARKS: 8 Q. And do you consider the size of the 9 repertoire, the growth of the repertoire as you --10 in evaluating performance rights licenses? A. Yes, they are directly connected to our 12 negotiations for licensing. Q. If I could turn your attention to Pandora 14 Exhibits 897 through 902. I'll ask you if you 15 recognize these documents? A. Yes, these are the --16 17 MS. BUCKLEY: I object to these exhibits 18 on the same basis. JUDGE BARNETT: They haven't been offered 19 20 yet. 21 MS. BUCKLEY: Okay. 22 BY MR. MARKS:

2 from the Service perspective about whether or not 3 there won't be enough musical works available to 4 operate his service. MS. BUCKLEY: Objection. It sounds like 6 what he just said is that Mr. Herring is going to be 7 relying on these documents for which -- which are 8 hearsay for which there's no foundation, to support 9 his claim that there's no shortage of writers. 10 MR. MARKS: I'd also like to respond that 11 ASCAP and BMI are organizations that represent music 12 publishers and songwriters. I think it's an 13 admission against interest. They're owned by the 14 same people that the Copyright Owners here purport 15 to represent. So these are the annual reports that 16 are publicly available, widely distributed to 17 licensees and other content partners. Frankly, I'm 18 surprised that they want to deny what the numbers 19 sav. 20 JUDGE BARNETT: The objection is 21 overruled. These are being admitted not to support 22 the truth of what ASCAP and BMI say their financials 23 are or their -- whatever. They're just being 24 offered as -- as materials upon which Mr. Herring 25 relies in his business decision making. Whether

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A. They are the annual reports for ASCAP, 2 for 2013, '14, and '15, and then for BMI, 2013, 2014, and 2015.

24 that have been included in your binder as Pandora

Q. What are the -- what are the documents

Q. And did you receive these documents in 5 the ordinary course of business?

A. Yes.

25 Exhibits 897 to 902?

- Q. Did you also review these documents in 8 preparation for your -- in preparing your written 9 rebuttal testimony?
- l10. A. Yes.
- Q. Were they attached as exhibits to your 11 12 written rebuttal testimony?
 - A. Yes.
- Q. Are these available to the public on 15 ASCAP and BMI's web site?
- 16 A. Yes.

13

17 MR. MARKS: Your Honors, I'd like to 18 offer Pandora Exhibits 897, 898, 899, 900, 901, and 19 902.

20 MS. BUCKLEY: Objection, there's no 21 foundation for these hearsay documents.

JUDGE BARNETT: Are you offering these 23 for the truth of the matter?

MR. MARKS: No, I'm offering them as --25 as informing Pandora's testimony, Mr. Herring's

1 they're --2 MS. BUCKLEY: As long as they're not 3 being relied on for the truth of the contents. 4 Thank you. 5 JUDGE BARNETT: I don't see how we could do that. So --7 MR. MARKS: Thank you, Your Honors. No 8 further questions. JUDGE BARNETT: Yes. Oh, I'm sorry. 10 MR. MARKS: I'm sorry. Before I yield 11 the microphone --12 JUDGE BARNETT: Did we start with 897? 13 897 through 902 inclusive are admitted. 14 | Pandora Exhibit Numbers 897, 898, 899, 15 900, 901, and 902 were marked and received into 16 evidence.) 17 MR. MARKS: Thank you, Your Honors. No 18 further questions. JUDGE BARNETT: Let's have a 20-minute 20 recess. I'm not sure where everyone stands on 21 having missed their lunch or eaten their lunch or 22 taken an early lunch or if you want a snack. So 23 we'll take 20 minutes, which will get us to about 8

24 -- or, sorry, 2 -- let's just say 2:10 and call it

25 good.

17 18

(A recess was taken at 1:48 p.m., after which the hearing resumed at 2:18 p.m.) JUDGE BARNETT: I anticipate some 3 cross-examination of Mr. Herring, but he chose not (Laughter) JUDGE BARNETT: Thank you, Mr. Herring. You may remain under oath. Are we in open session? MS. BUCKLEY: I think very briefly, and 9 even then it's simply based on the fact that there 11 were certain material in Mr. Phillips' testimony 12 that was not designated as restricted, and I'm going to go over some of that, but if counsel believes otherwise, I'm happy to treat it as restricted. JUDGE BARNETT: Okay. All right. Thank 15 16 you. 17 CROSS-EXAMINATION BY MS. BUCKLEY: 19 Q. Good afternoon, Mr. Herring. 20 JUDGE BARNETT: Ms. Buckley, could you 22 identify yourself for the record and lower that mike just a little bit so it picks up your voice? Thanks. 25 MS. BUCKLEY: My name is Lisa Buckley.

1 would probably -- the breadth of coverage necessary under interactive service is dramatically more than a radio service.

- Q. Does that -- when you refer to that, are you referring to breaking down additional songs through the Music Genome Project?
 - Α. Yes.
- And what -- what would be the difference, 8 Q. 9 if you will, between what you would do if you just maintained your non-interactive service as opposed to what you would do in connection with your 12 additional service offerings?
- A. So in a non-interactive service, we 14 choose the song that we play for you. And 99 percent of the songs that people want to hear in that environment are contained within a catalogue of maybe a couple million.

In an on-demand environment, the value proposition is different. Although as I stated 19 20 earlier today we believe north of 70 percent of 21 listening will still be in a non-interactive 22 environment, the remaining piece, which is a big 23 part of why people are paying for the subscription, 24 the value proposition, is that they can hear a 25 specific song when they enter it. And so the need

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1 I'm from Pryor Cashman and represent the Copyright 2 Owners.

3 BY MS. BUCKLEY:

- Q. Mr. Herring, you spend a significant portion of your written direct testimony and also your testimony this morning talking about the Music Genome Project. Do you recall that?
 - A. Yes.
- Q. And you talked about the expense 10 associated with creating it and the time and effort 11 that it took to create it. These are all expenses 12 and time that would have been spent and incurred 13 regardless of whether Pandora expanded its service into Plus and Premium; isn't that correct?
 - A. Yes.

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- And just to be clear, the Music Genome 17 Project was not something that Pandora created in connection with its decision to expand its service offerings to Plus and Premium, correct?
 - A. Yes.
- 21 And Pandora would continue to update the 22 Music Genome Project regardless of whether it had 23 made the decision to expand its service offerings 24 from purely a non-interactive service, correct? 25
 - A. Not at the same level, but that activity

1 for a much broader catalogue is important because 2 the value proposition is if you want to hear a 3 specific song, you enter it.

And so instead of a couple million songs being sufficient to power the service, you know, it is tens of millions of songs.

- Q. And in addition to the Music Genome Project, Pandora also breaks songs down by algorithm, correct?
- A. Not -- we use machine learning to evaluate songs, yes, in connection with human 11 analysis through the genome project.
- The Premium service, I believe you said, is launching tomorrow? 14
 - In limited release, yes. A.
 - Q. Congratulations.
 - Thank you. A.
- Has Pandora analyzed through the Music 18 Q. Genome Project the number of songs in its on-demand 20 library?
- 21 Not every song in the on-demand library. 22 That's not the way it works.
- How many songs are in the on-demand 23 Q. 24 library?
 - Can we go into restricted session? A.

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		1	EXHIBIT NO: MARKED/RECEIVED REJECTED
1	Q. Yes.	2	PANDORA
2		1	
		3	902 935
3	not public.	4	905 979
4	JUDGE BARNETT: Thank you.	5	974 908
5	(Whereupon, the trial proceeded in	6	COPYRIGHT OWNERS
6	confidential session.)	1 -	COPIRIGHI ONNERS
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1	CONTENTS	1	1060 CERTIFICATE
1	CONTENTS WITNESS DIRECT CROSS REDIRECT RECROSS	1 2	CERTIFICATE
1 2 3	CONTENTS WITNESS DIRECT CROSS REDIRECT RECROSS MICHAEL HERRING	1 2 3	CERTIFICATE I certify that the foregoing is a true and
1 2 3 4	CONTENTS WITNESS DIRECT CROSS REDIRECT RECROSS	1 2 3 4	CERTIFICATE I certify that the foregoing is a true and accurate transcript, to the best of my skill and
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1 2 3 4 5 6 7 8 9	WITNESS DIRECT CROSS REDIRECT RECROSS MICHAEL HERRING 842 936 1037 1052 CONFIDENTIAL SESSIONS: 906-924, 941-end E X H I B I T S EXHIBIT NO: MARKED/RECEIVED REJECTED PANDORA	1 2 3 4 5 6 7 8 9	CERTIFICATE I certify that the foregoing is a true and accurate transcript, to the best of my skill and ability, from my stenographic notes of this proceeding.
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1 2 3 4 5 6 7 8 9 10 11 12	WITNESS DIRECT CROSS REDIRECT RECROSS MICHAEL HERRING 842 936 1037 1052 CONFIDENTIAL SESSIONS: 906-924, 941-end EXHIBITS EXHIBITS EXHIBIT NO: MARKED/RECEIVED REJECTED PANDORA 880 845 881 850	1 2 3 4 5 6 7 8 9 10 11 12	CERTIFICATE I certify that the foregoing is a true and accurate transcript, to the best of my skill and ability, from my stenographic notes of this proceeding. 3/15/17 Karen Brynteson
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